

S. C. Weddington,

Permutation Lock.

No. 107,207.

Patented Sept. 6. 1870.

Fig. 1.

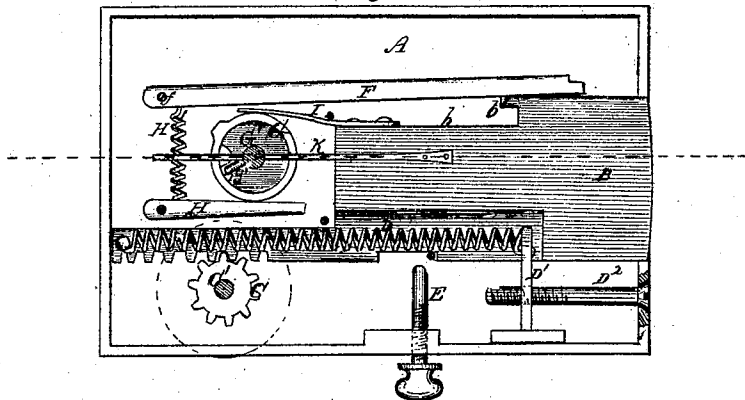


Fig. 2.

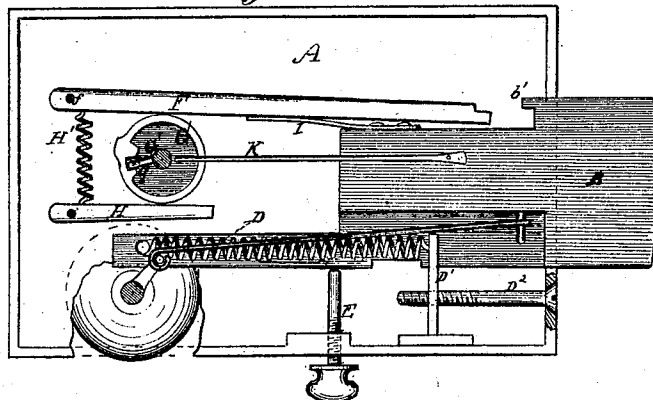


Fig. 3.

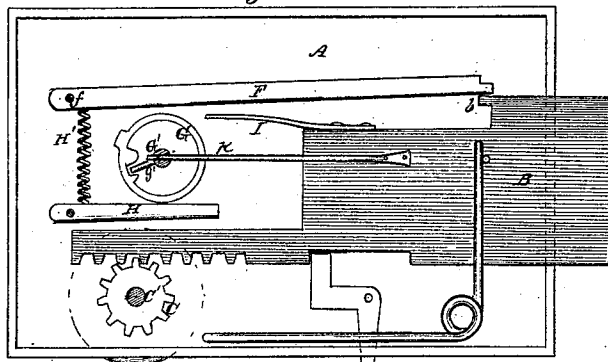


Fig. 5.

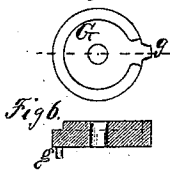
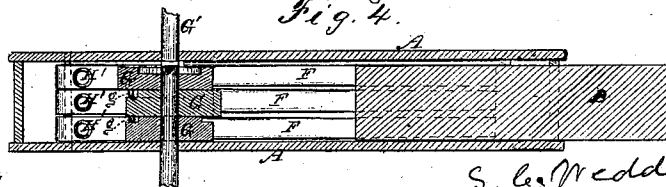


Fig. 4.



Witnesses
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SAMUEL C. WEDDINGTON, OF JONESBOROUGH, INDIANA.

Letters Patent No. 107,207, dated September 6, 1870.

IMPROVEMENT IN COMBINED LOCK AND LATCH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SAMUEL C. WEDDINGTON, of Jonesborough, in the county of Grant and State of Indiana, have invented certain Improvements in a Combined Lock and Latch, which I hereby declare to be fully, clearly, and exactly described in the following specification, reference being had to the annexed drawing making part thereof, and in which—

Figure 1 is an elevation of my improved lock and latch, with the rear plate removed to show the interior mechanism.

Figures 2 and 3 are similar views, showing the bolt in different positions, and some modifications in the construction of the operating parts.

Figure 4 is a section on line *xx* of fig. 1.

Figures 5 and 6 are views of the tumblers, through which the dogs are operated.

The same letters are used in all the figures in the designation of identical parts.

This invention relates to a door-lock of that class which is capable of serving not only as a common latch, but also as a lock, by having the bolt caught after it has been projected, so that it cannot be retracted into the case without the interposition of a key, or other similar device for releasing it from the action of the catches.

My improvements consist in the combination and arrangement of several parts of the lock and latch, hereinafter to be more fully described.

In the annexed drawing—

A represents the case, in which the different parts of the device are inclosed.

The locking-bolt B is to have substantially the form shown in the drawing, and is arranged in the case to slide in and out through an aperture in one of its ends.

The bolt is operated by means of a pinion, C, on the knob-spindle C, meshing into a rack formed upon the under edge of the bolt; or, instead of by the rack and pinion, the bolt may be moved by a rod or link, connecting it to a short arm on such spindle, as shown in fig. 2.

D represents a spring, attached at one end to a support, D', and at the other to the inner end of the locking-bolt, which latter is by the action of such spring projected through the end of the case. When this spring is arranged as shown in the present instance in figs. 1 and 2, a suitable recess is formed in the face of the locking-bolt for its accommodation. For the purpose of regulating the tension of this spring, its support D' is made movable, by providing a hole through it, with a female-screw thread, and placing it upon a screw, D².

The head of the latter bears against the outer surface of the case, so that, by turning it in one direction

or the other, the position of the support will be changed, and thereby the coils of the spring compressed or dilated, as the case may be.

In fig. 3 I have illustrated a different form of spring, which may be employed in cheap locks of this kind, dispensing with the tension-regulating devices.

The screw E, or a catch, such as shown in fig. 3, is used to determine the range of motion of the locking-bolt, when the device is employed as a latch, by screwing it so far into the case that its shank enters a recess in the lower edge of such bolt, and stops its outward movement before the dogs F, soon to be described, can fall into the recess in the upper edge.

F F are a series of dogs pivoted at one end, one over the other, upon a common pin, f, from which point they extend forward in the direction of the locking-bolt, upon the upper edge of which their other ends are supported.

Their length is such that when the device is arranged to act as a latch their loose ends will project beyond the shoulder formed by the recess *b* in the upper edge of the bolt, when thrown out as far as the screw E will permit, so that they cannot interfere with the movements of said bolt; but on withdrawing the screw E or catch, said bolt will be projected so far by the action of the spring as to carry its shoulder beyond the points or ends of the dogs, which at once fall into the recess behind it, and prevent the retraction of the bolt until they are again raised above the shoulder thereon.

To guard against picking, a short projection, *b'*, is formed on the shoulder of the bolt, under which the ends of the dogs enter, so that they can be raised only when such bolt is in its outermost position.

The dogs are raised by an equal number of tumblers, G, which are arranged to turn loosely upon, and are operated by, a spindle, G', which passes through the plates of the case, and may be provided on its ends with knobs, by which to turn it.

Each tumbler has a projection or nose, *g*, on its periphery, which is to be turned under the dog opposite to it, to raise the same out of the recess *b* in the bolt.

One of the outer tumblers is operated by a pin, *g'*, on the spindle G', as shown, and the succeeding ones through a stud upon the opposite face of such tumbler, which stud enters a concentric groove in the next, and turns it, on coming in contact with a blank space between the ends of the groove therein.

The last-named tumbler moves the next by the same means, and so on through the series, if more than three are used.

The tumblers are arranged with reference to a dial upon the outer surface of the face-plate, around the spindle G', by the assistance of which, and a pointer on such spindle, each may be set to bring its nose *g*

under the dog opposite to it. The combination of these tumblers is different in each lock.

Each dog is connected by a spring, H', to a pivoted bar, H, there being as many bars as there are dogs and tumblers, the latter being arranged between the two former, as shown. The springs draw the dogs and bars toward each other, clamping the tumblers so as to prevent them from turning on each other by friction alone, and also insure the descent of the dogs into recesses in the locking-bolt.

I is a thin piece of metal secured upon the locking-bolt in the recess *b*, and projecting some distance to the rear, so that on retracting the bolt it will come in contact with the noses on the tumblers, and turn them from under the dogs, to leave the latter free to again fall into the recess *b* of the bolt whenever desired.

K is a projecting pin secured upon the face of the bolt, which, when used, extends through a hole in the

spindle G', and prevents its turning, except when the bolt is in its outermost position.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the tumblers G, dogs F, springs H', and bars H, all arranged substantially as set forth.

2. The projecting finger I, on the locking-bolt B, arranged to operate substantially as and for the purpose set forth.

3. The combination and arrangement of the spring D, its support D', and screw D', substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses: SAMUEL C. WEDDINGTON.

J. W. SNIDELER,
IRA GAGE.